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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,040	04/01/2004	Glen Garfunkel	HT03-027	9265

7590 02/02/2007
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EXAMINER

TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
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3729

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/816,040	Applicant(s) GARFUNKEL, GLEN	
	Examiner A. Dexter Tugbang	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 7-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the invention of Group I, Claims 1 through 6 in the reply filed on November 13, 2006 is acknowledged. The traversal is on the ground(s) that the field of searches for the inventions of Groups I, II and III would clearly and necessarily be coextensive and thus, there would be no burden to examine all of the inventions, and that the reasons for distinctness used is speculative and has nothing to do with the claims in the application. This is not found persuasive because the searches would non-coextensive requiring completely different search queries, text searching, and database searching, based upon the different features claimed for each Group. This would place a severe burden on the examiner to search and examine all of the inventions. Moreover, the reasons for distinctness as noted in the last Office Action has everything to do with the claims of the instant application because these very reasons were based on the claims themselves.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 7 through 31 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on November 13, 2006.

It is noted that Claim 6 was inadvertently omitted from Group I in the last Office Action. Claim 6 will be examined on the merits along with Claims 1 through 5 of the elected invention.

Specification

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.**

Extensive mechanical and design details of apparatus should not be given.

4. The abstract of the disclosure is objected to because the content is not directed to the claimed invention, e.g. the process steps, or equivalent thereof, of Claim 1. Correction is required. See MPEP § 608.01(b).
5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A Process of Manufacturing a Side Pinned Magnetic Recording Sensor--.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 through 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasegawa et al 5,910,344.

Regarding Claim(s) 1 through 3, Hasegawa discloses a method of making a magnetically pinned layer (in Fig. 3) comprising: providing a layer of antiferromagnetic magnetic material (e.g. 41) having an edge (e.g. top surface of 41); and depositing a layer of magnetic material (e.g. 42), a part of which contacts the edge (col. 13, lines 50-61). The magnetic material further comprises a pair of ferromagnetic layers (e.g. 41, 44) separated by a non-magnetic layer (e.g. 43), and contacting, an antiferromagnetic coupling layer (e.g. 46). The claimed “overlap” is read as a region where the antiferromagnetic layer (e.g. 46) contacts with the other layers (e.g. 41, 42, 43, 44).

Regarding Claim(s) 4 through 6, Hasegawa discloses a method of making a magnetically pinned layer (in Fig. 3) comprising: providing a pair of antiferromagnetic layers (e.g. 41, 46) having opposing inside edges (e.g. top surface of 41 and bottom angled surfaces of 46); depositing a layer of magnetic material (e.g. 42) between, and in contact with, the antiferromagnetic layers; and then magnetizing the layer of magnetic material during operation (col. 16, lines 24-31 and col. 4, lines 10-18).

In Hasegawa, the separation between the pair of antiferromagnetic layers is a direct result of the thickness of each of the layers (e.g. 42, 43, 44). Hasegawa states that the thicknesses of these layers (e.g. 42, 43, 44) are 30, 20 and 75 angstroms, respectively (col. 13, lines 53-58). Adding these thicknesses up would mean that the opposing inside edges would be separated by a distance of 125 angstroms (i.e. 0.0125 microns), thus, the limitations of "providing...2 microns" (lines 2-3 of Claim 4) are fully met by Hasegawa.

Hasegawa further teaches that the magnetic material is made up of a pair of magnetically antiparallel ferromagnetic layers (e.g. 42, 44) contacting the antiferromagnetic coupling layer (e.g. 46) and separated by a non-magnetic layer (e.g. 43) that also contacts the antiferromagnetic coupling layer. The ferromagnetic layers (e.g. 42, 44) are antiparallel because of their antiparallel magnetic directions (e.g. a, b, in Fig. 3, col. 6, lines 13-17). Note that ferromagnetic layer 42 is pinned.

Conclusion

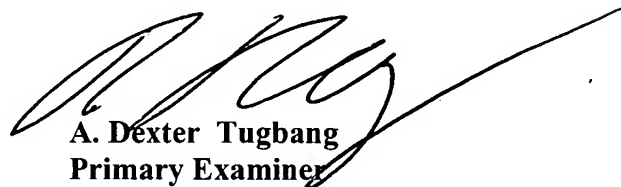
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3729

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



A. Dexter Tugbang
Primary Examiner
Art Unit 3729

January 30, 2007